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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,569	11/17/2005	Shuhei Ogawa	033082M239	8765
441	7590	08/14/2007		
SMITH, GAMBRELL & RUSSELL 1850 M STREET, N.W., SUITE 800 WASHINGTON, DC 20036			EXAMINER OLSEN, ALLAN W	
			ART UNIT	PAPER NUMBER
			1763	
			MAIL DATE	DELIVERY MODE
			08/14/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Advisory Action</b> <b>Before the Filing of an Appeal Brief</b>	<b>Application No.</b> 10/522,569	<b>Applicant(s)</b> OGAWA ET AL.	
	<b>Examiner</b> Allan Olsen	<b>Art Unit</b> 1763	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 09 July 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 5 months from the mailing date of the final rejection.  
 b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

#### AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
 (a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);  
 (b) ☐ They raise the issue of new matter (see NOTE below);  
 (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
 (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
 5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
 6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
 7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
 The status of the claim(s) is (or will be) as follows:  
 Claim(s) allowed: \_\_\_\_\_.  
 Claim(s) objected to: \_\_\_\_\_.  
 Claim(s) rejected: \_\_\_\_\_.  
 Claim(s) withdrawn from consideration: \_\_\_\_\_.

#### AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
 9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
 10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

#### REQUEST FOR RECONSIDERATION/OTHER

11. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: \_\_\_\_\_.  
 12. ☒ Note the attached Notice of References Cited (PTO-892).  
 13. ☐ Other: \_\_\_\_\_.

*Allan Olsen*

Allan Olsen  
 Primary Examiner  
 Art Unit: 1763

Continuation of 3. NOTE: Applicant states:

"Claim 1 has been amended in part to include the contents of canceled claims 6 and 14 therein. Claim 7 has been amended in part to include the contents of canceled claims 13 and 15 therein.

Claims 1 and 7 have been further amended to more clearly present the steps of the claimed methods.

Applicants submit that the amendments herein do not raise new issues. Accordingly, Applicants respectfully request entry of this Amendment.

...Thus, both claims 1 and 7 now include the following features:

(i) the etching method is carried out by a capacitively coupled plasma etching system, which forms a high-frequency electric field between a pair of opposed electrodes disposed in the processing vessel to generate the plasma; and

(ii) the distance between the electrodes is such that a distance between a first of said electrodes and a wafer disposed on a second of said electrodes is from 30 to 90 mm."

The examiner notes that claim 14 is dependent upon claim 6, which in turn is dependent upon claim 1. Therefore, if the after-final amendment were to be entered, amended claim 1 would ostensibly be the equivalent of claim 14. However, claim 1, as presented in the after-final amendment is distinct from claim 14 because claim 14, by way of claim 6, requires that there be a pair of electrodes disposed in the processing vessel and this is not required by claim 1 as presented in the after-final amendment.

Furthermore, if the amendment were to be entered, further searching would be required because various combinations of limitations that were not previously presented in combination are now presented with each dependent claim. For example, the combination of limitations in claims 2 and 14 was not previously considered. Also, it is noted that claim

1 has been amended to include positive recitations of "controlling" a CD shift value and "causing" particular a residence time.

With respect to the rejection of claims as being unpatentable over Joubert IVO Desphande and FIVO Eriguchi, Applicant argues:

"Neither Joubert, Desphande nor Eriguchi teaches features (i) and (ii) above.

According to the Office Action, Joubert teaches the use of conventional etching sources, with specific mention of LAM TCP and Applied Material PDS reactors. The Examiner takes official notice that conventional etching sources, particularly the reactors named in Joubert, have an electrode spacing within the claimed 30-90 mm range. Joubert teaches the use of an induction coil coupled plasma etching system, wherein plasma is formed by using an induction coil. In such a system, the lower electrode of the system has nothing to do with the formation of the plasma. That is to say, the distance between the upper electrode (the first electrode) and the lower electrode (the second electrode) in the induction coil coupled plasma etching system is not selected based on whether a plasma will be formed."

The examiner notes that the induction coil of the LAM TCP and the Applied Materials PDS reactors is a source of capacitive coupling (see paragraph [0088] of Brcka, which is made of record with attached USPTO form 892). Furthermore, while the noted LAM TCP and Applied Materials PDS reactors are indeed ICP systems, Joubert is not limited to such reactors. In fact Joubert clearly teaches that "any conventional etching source" can be used. Joubert explicitly recites RIE (Reactive Ion Etching) as one such possible source and RIE etching apparatus commonly comprise the claimed pair of electrodes disposed with in the chamber with the claimed spacing. The gap between the electrodes is a known cause-effective variable and optimization of this parameter is well within the level of ordinary skill.